

13

Standard common description of Item :

Trans receiver, VHF, handheld Walkie-talkie sets 1W/5W (tuned for rated [power of 5 Watts synthesized with 2200 mAh, Ni-Mh Battery pack, Configuration VH-3 Band 136-174 MHz full band along with one spare Battery pack of Capacity 2200 mAh capacity & Rapid chargers as per specifications enclosed. The VHF walkie-talkie shall be MIL standard compliance for 810C, D, E & F duly verified by RDSO.

Technical Specification:

General : Recommended make & Model Motorola GP-328/Kenwood TK 2207 or equivalent shall be MIL standard complied & certified by RDSO for MIL STD 810C, D, E & F.

**Feature Wise Configuration-
VH3 option**

- (i) Simple Press to talk
- (ii) CTCSS or DCS (iii) Low Battery alert
- (iv) VOX for Hand free Operations
- (v) PTT ID Encode
- (vi) Protection against high VSWR
- (vii) Busy Channel lock out
- (viii) Channel Scanning with call quieting facility
- (ix) Anyone of DTMF/Digital Signalling
- (x) Capable of being killed with SOS/Siren

Technical Specification :

1. Frequency range : 136-174 MHz (Full band only)
2. No. of channels : 16 channels or more Channels 1&3 should be programmed to cover end frequencies & channel 2 for the mid frequencies of the quoted frequency spread. Remaining channels should also be programmed to cover the quoted frequency spread.
3. Channel spacing : 12.5 KHz
4. Frequency spared : 5 MHz or more without degradation in Tx/Rx Specification
5. Frequency stability : 5 PPM or better
6. Type of Emission : 11 KOF3
7. Type of operation : Simplex, press to talk with built in condenser mic & speaker.
8. Type of antenna : Helical antennas suitable for the frequency Spot specified in supply order.
9. Speaker Impedance : To be specified by the firms both at internal & External speaker point.
10. Output Impedance/Termination: 50 Ohms & the aerial terminal should have BNC female socket or appropriate adapter with the sets for DCPW for testing /evaluation.
11. Protection (i) Reverse polarity protection should be provided.
(ii) The final transistor should be protected against high VSWR
12. Weight : 600 gm with Battery
13. Power Source : 2200 mAh 7.2 V/7.4 V, Ni-Mh
14. Voltage : Test Voltage to be indicated by the tenderers.

जे. एस. मीणा
J. S. MEENA
उप मुख्य साम.
Dy. Chief
पश्चिम मध्य रेल, जबलपुर
West Central Railway, Jabalpur

Transmitter

1. PF Power output : 1W/5W +/- 0.5 dB switchable/ programmable
2. Frequency Deviation : +/- 2.5 KHz Max (For 100 % at 1 KHz) for 12.5 KHz channel spacing.
3. Modulation Sensitivity : 1 to 10 mV at 1 KHz at mic. Input for +/- 1.5 KHz (for 12.5 KHz channel Spacing) standard deviation.
4. Modulation Distortion : Less than 5% at 1 KHz reference for +/- 1.5 KHz (for 12.5 KHz Channel spacing) standard deviation.
5. Modulation Fidelity : +1, -3 dB of 6 dB/Octave pre emphasis Characteristics from 350 Hz to 2700 Hz with 1 KHz as reference.
6. Spurious & Harmonic suppression : Better than 60 dB.
7. VSWR : better than 1.5

Receiver :

1. Sensitivity : 0.30 micro V for 12 dB SINAD.
2. Squelch Sensitivity : 0.25 micro V or better at threshold.
3. Selectivity : better than 60 dB
4. Image rejection : Better than 65 dB.
5. Audio output : 250 mW/500 mW with less than 5% distortion at 1 KHz reference measured at specified AF output.
6. Audio response : +1, -3 dB of 6 dB/Octave de- emphasis characteristics from 350 Hz to 2700 Hz with 1 KHz as reference.

Rapid Battery charger :

- a) Input Voltage : 230 V +/- 10% 50 HZ_{±1}
- b) Output Voltage : As per the set battery pack for which charger is submitted.
- c) Charging capability : Capable of charging 1 battery set at a time.
- d) Battery charging rate : The charging current shall be within 1 Amp. The charging time shall be 1 to 3 hrs (for charging batteries upto 1800 mAh) or 2 to 4 hrs (for charging batteries from 2000 to 3000 mAh) respectively.
- e) Reverse polarity protection (DC input) should be provided.
- f) Reverse polarity protection (Battery Terminal) should be provided.
- g) Short Circuit protection should be provided.
- h) Visual indication for all modes of charging status.
- i) DC input cable with battery eyelet to be provided with DC operated charger.

Special condition : As per RDSO Ltr. No. STT/WL/VHF/209/Vol. V Dt. 05-02-2010 only MIL standard compliance for 810C, D, E & F duly verified by RDSO will be considered for procurement. MIL-STD test pertains to climatic/Environments/Vibration parameter & arc for, Low pressure, High temperature, Low temperature, Temperature shock, solar radiation, Rain Humidity, Salt Fog, Dust, Vibration & Shocks.

[Signature]
 वरि. मंडल अभियंता (वृ. सं.)
 पश्चिम मध्य
 Sr. Divn. Engr
 W.C. Railway, Jabalpur

[Signature]
 वरिष्ठ संचालक अभियंता (वृ. सं.)
 (उत्तर मध्य) वरि. मध्य रेल, जबलपुर
 Senior Section Engineer (Tele)
 W.C. Railway, Jabalpur

[Signature]
 जे. एस. मीणा
 J. S. MEENA
 उप मुख्य सामग्री प्रबंधक (वृ. सं.)
 Dy. Chief Material Officer (W.C.)
 पश्चिम मध्य रेल, जबलपुर
 West Central Railway, Jabalpur